

FTU=s, T=3*FTU, B=2, S=12, FTU=120 Picosecond Modulation Example

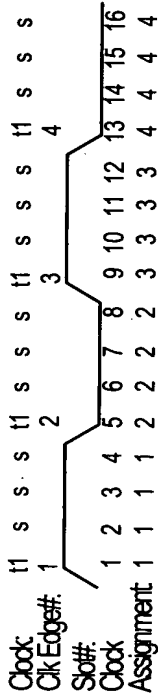
# edges	Symbols												# of t's	# of p's	# p states	total states	Comments
0 edge	s	s	s	s	s	s	s	s	s	s	s	s	0	0	1	1	Don't use this state
1 edge	p	p	p	p	p	p	p	p	p	p	p	p	1	9	10	20	
2 edge	t	s	p	p	p	p	p	p	p	p	p	p	2	6	7	28	
2 edge	s	t	s	s	p	p	p	p	p	p	p	p	2	5	6	24	
2 edge	s	s	t	s	s	p	p	p	p	p	p	p	2	4	5	20	
2 edge	s	s	s	t	s	p	p	p	p	p	p	p	2	3	4	16	
2 edge	s	s	s	s	t	s	p	p	p	p	p	p	2	2	3	12	
2 edge	s	s	s	s	s	t	s	p	p	p	p	p	2	1	2	8	
2 edge	s	s	s	s	s	s	t	s	p	p	p	p	2	0	1	4	
3 edge	t	s	s	t	s	s	p	p	p	p	p	p	3	3	4	32	
3 edge	t	s	s	s	t	s	s	p	p	p	p	p	3	2	3	24	
3 edge	t	s	s	s	s	t	s	p	p	p	p	p	3	1	2	16	
3 edge	t	s	s	s	s	s	t	s	p	p	p	p	3	0	1	8	
3 edge	s	t	s	s	s	s	p	p	p	p	p	p	3	2	3	24	
3 edge	s	t	s	s	s	s	s	p	p	p	p	p	3	1	2	16	
3 edge	s	t	s	s	s	s	s	t	s	p	p	p	3	0	1	8	
3 edge	s	t	s	s	s	s	s	s	p	p	p	p	3	0	1	8	
3 edge	s	s	t	s	s	s	s	s	p	p	p	p	3	1	2	16	
3 edge	s	s	s	t	s	s	s	s	t	s	p	p	3	0	1	8	
3 edge	t	s	s	s	s	s	s	s	s	t	s	p	4	0	1	16	"Binary"
													59			308	

Total p states	59	1 Edge P States	10	columns	12
Total States	308	2 Edge P States	28	frequency	6.94E+08
Total mod	8.266786541	3 Edge P States	20	Payload	5.56E+09
Total trunc mod	8	4 Edge P States	1	Payload Ratio	1.33
				Payload Ratio versus "binary"	2.00

FIG. 1

FTU=s, T1=4*FTU, T2=5*FTU, B1=2, B2=2, S=16, FTU=120 Picosecond Modulation Example

FIG. 3



# edges	Symbols	# of t1's	# of t2's	#p1's	p1's states	#p2's	p2's states	p states	B1	B2	total states
1 T1	p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1	1	0	12	13	0	1	14	2	2	26
2 T1	t1 s s p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1	2	0	8	9	0	1	10	2	2	36
2 T1	s t1 s s p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1	2	0	7	8	0	1	9	2	2	32
2 T1	s s t1 s s p1 p1 p1 p1 p1 p1 p1 p1 p1 p1 p1	2	0	6	7	0	1	8	2	2	28
2 T1	s s s t1 s s p1 p1 p1 p1 p1 p1 p1 p1 p1 p1	2	0	5	6	0	1	7	2	2	24
2 T1	s s s s t1 s s p1 p1 p1 p1 p1 p1 p1 p1 p1	2	0	4	5	0	1	6	2	2	20
2 T1	s s s s s t1 s s p1 p1 p1 p1 p1 p1 p1 p1	2	0	3	4	0	1	5	2	2	16
2 T1	s s s s s s t1 s s p1 p1 p1 p1 p1 p1 p1	2	0	2	3	0	1	4	2	2	12
2 T1	s s s s s s s t1 s s p1 p1 p1 p1 p1 p1	2	0	1	2	0	1	3	2	2	8
2 T1	s s s s s s s s t1 s s p1 p1 p1 p1 p1	2	0	0	1	0	1	2	2	2	4
3 T1	t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	4	5	0	1	6	2	2	40
3 T1	t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	3	4	0	1	5	2	2	32
3 T1	t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	2	3	0	1	4	2	2	24
3 T1	t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	1	2	0	1	3	2	2	16
3 T1	t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	0	1	0	1	2	2	2	8
3 T1	s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	3	4	0	1	5	2	2	32
3 T1	s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	2	3	0	1	4	2	2	24
3 T1	s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	1	2	0	1	3	2	2	16
3 T1	s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	0	1	0	1	2	2	2	8
3 T1	s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	3	4	0	1	5	2	2	32
3 T1	s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	2	3	0	1	4	2	2	24
3 T1	s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	1	2	0	1	3	2	2	16
3 T1	s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	0	1	0	1	2	2	2	8
3 T1	s s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	2	3	0	1	4	2	2	24
3 T1	s s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	1	2	0	1	3	2	2	16
3 T1	s s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	0	1	0	1	2	2	2	8
3 T1	s s s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	1	2	0	1	3	2	2	16
3 T1	s s s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	0	1	0	1	2	2	2	8
3 T1	s s s s s t1 s s s s s s s s p1 s s p1 s s p1 s s p1 s s	3	0	0	1	0	1	2	2	2	8

Total p states	401
Total States	1678
Total mod	1.0712527000439800E+01
Total trunc mod	10
columns	16
frequency	5.21E+08
Payload	5.58E+09
Payload Ratio	1.34
Payload Ratio (Truncate)	1.2844987615765900E+00

FIG. 3 (cont.)

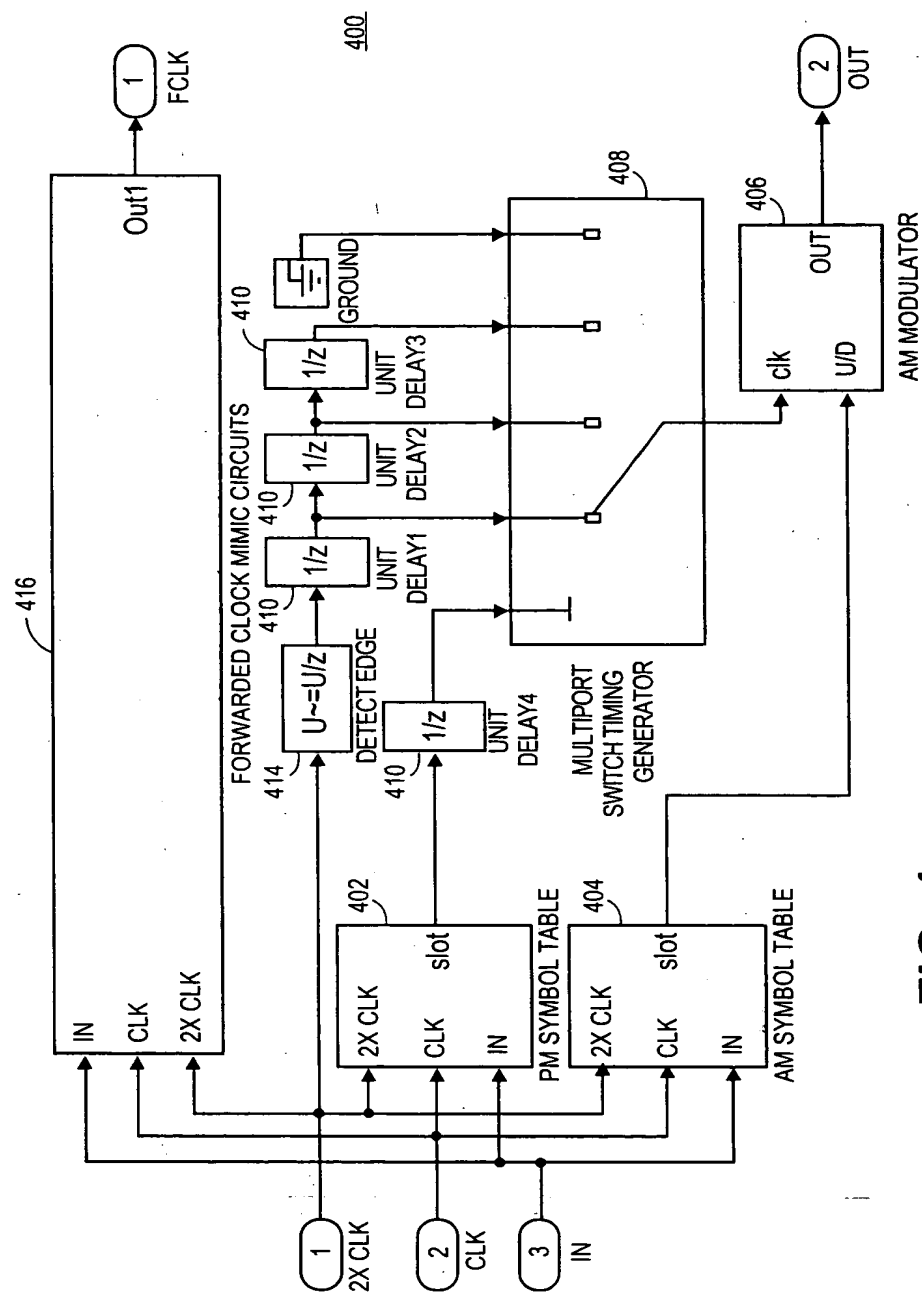


FIG. 4

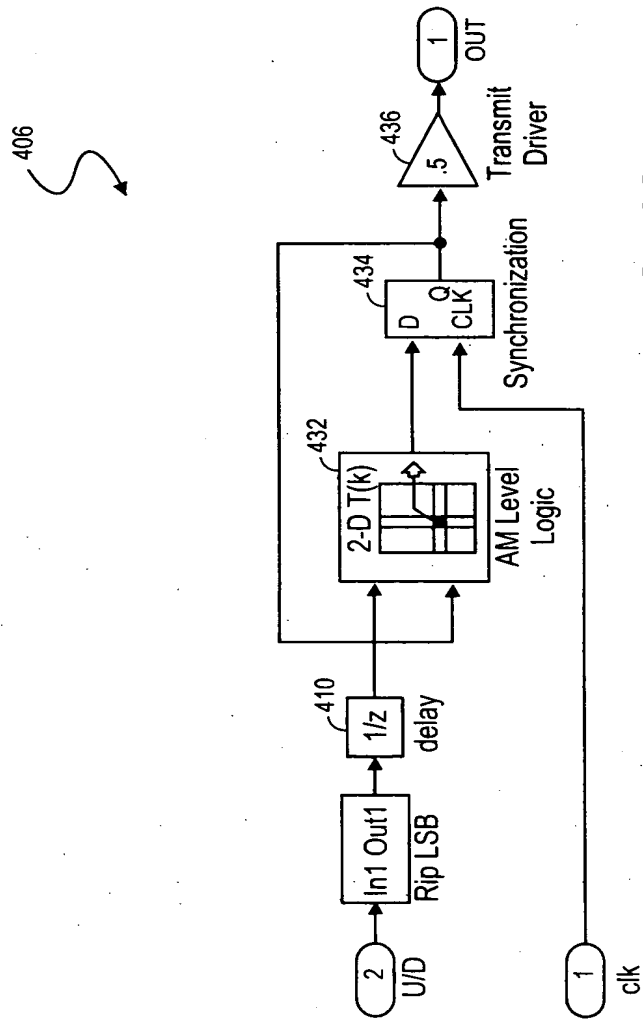


FIG. 4A

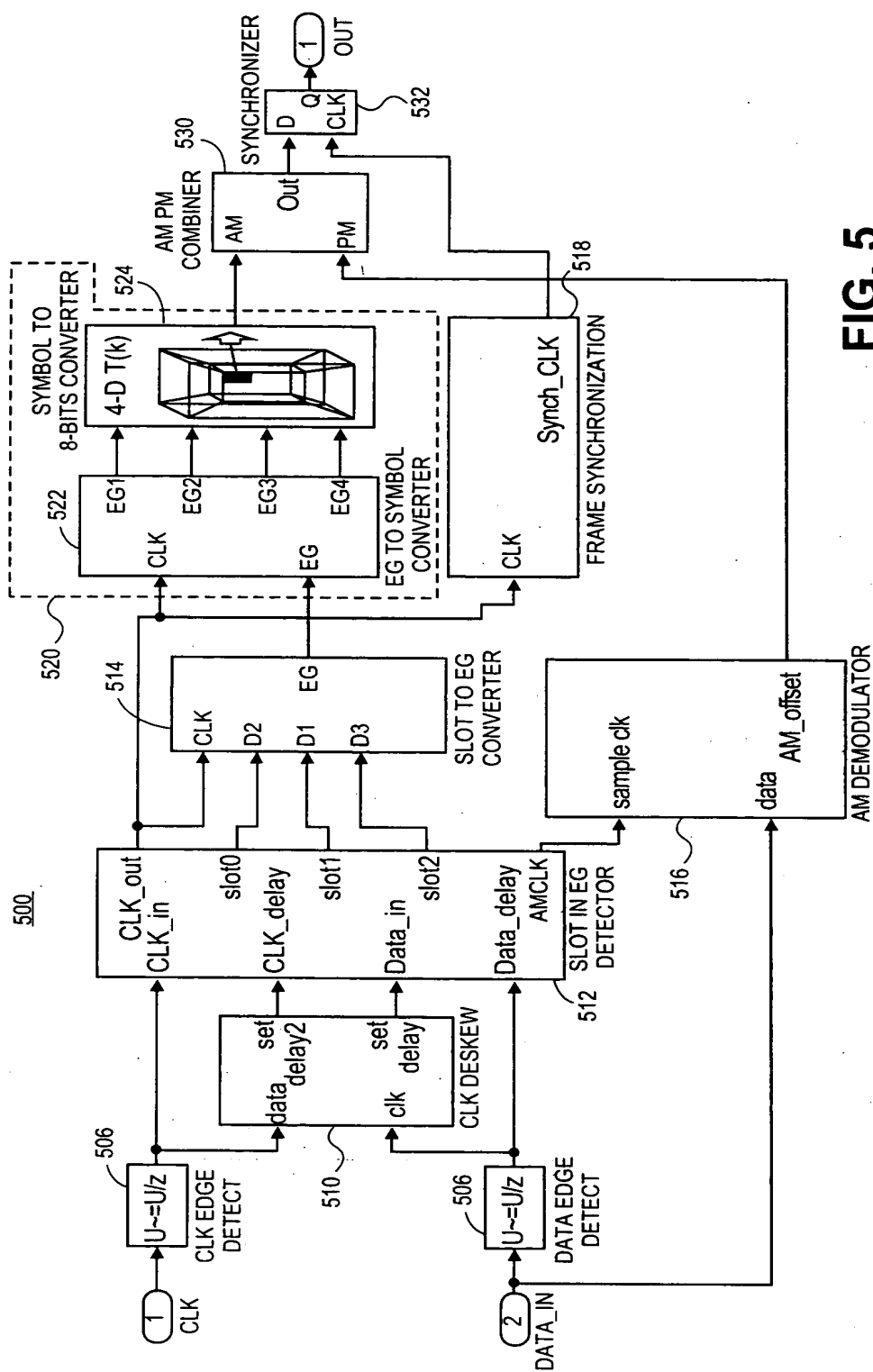


FIG. 5

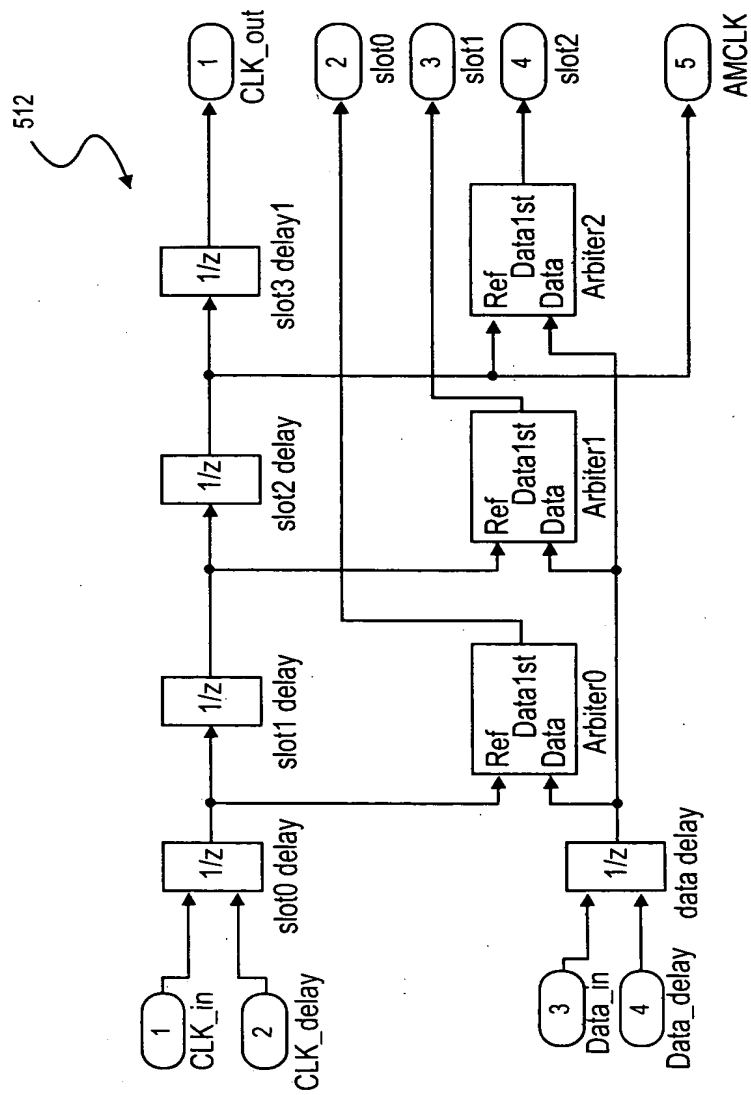


FIG. 5A

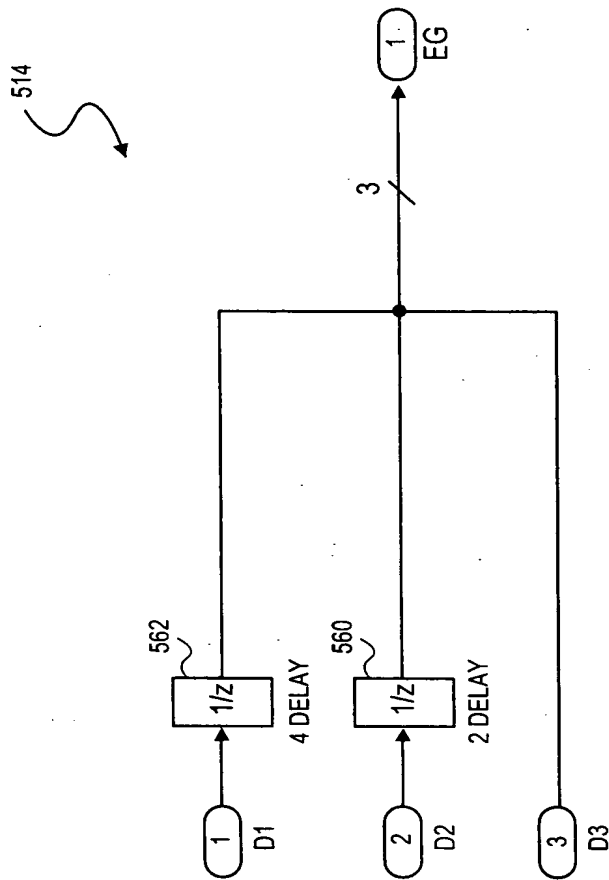


FIG. 5B

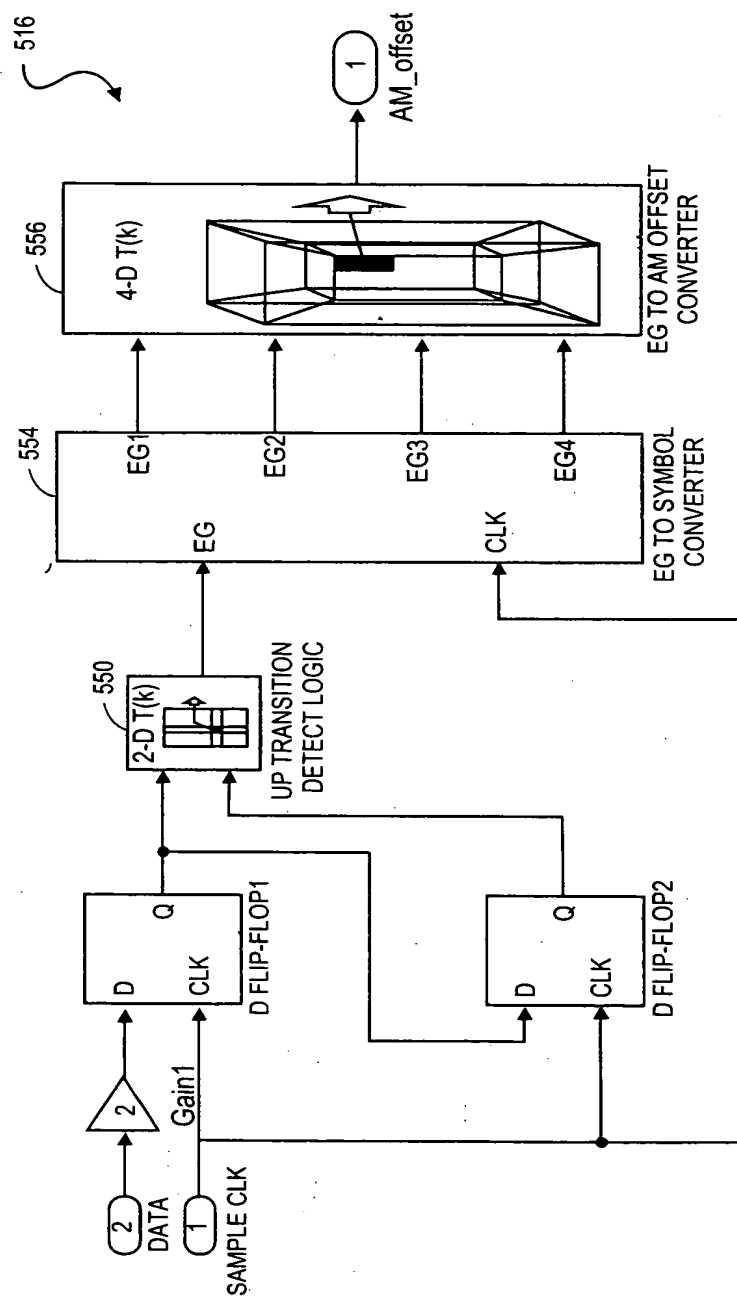


FIG. 5C

FIG. 6

FTU=s, T=3*FTU, B=2, S=12, FTU=120 Picosecond Modulation Example

Symbols					Mapping to 8 bit modulation								Control Signals							
EG1	EG2	EG3	EG4		# of t's	# of p's	# p states	total states	7	6	5	4	3	2	1	0	EG1	EG2	EG3	EG4
0 edge	s s s	s s s	s s s		0	0	4	4	Not Used	0	0	0	0	0	0	0	3	3	3	3
1 edge	+ s s s	s s s	s s s		4	0	4	4	Not Used	1	0	0	0	0	0	0	3	3	3	3
1 edge	s + s s	s s s	s s s		4	0	4	4	Not Used	1	0	0	0	0	0	0	3	3	3	3
1 edge	s s + s	s s s	s s s		4	0	4	4	Not Used	1	0	0	0	0	0	0	3	3	3	3
1 edge	s s s +	s s s	s s s		4	0	4	4	Not Used	1	0	0	0	0	0	0	3	3	3	3
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s s s s	s s s	s s s		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1 edge	s																			

FIG. 6 (cont.)

[illegible]

FIG. 6 (cont.)

FIG. 6 (cont.)

[illegible]

FIG. 6 (cont.)

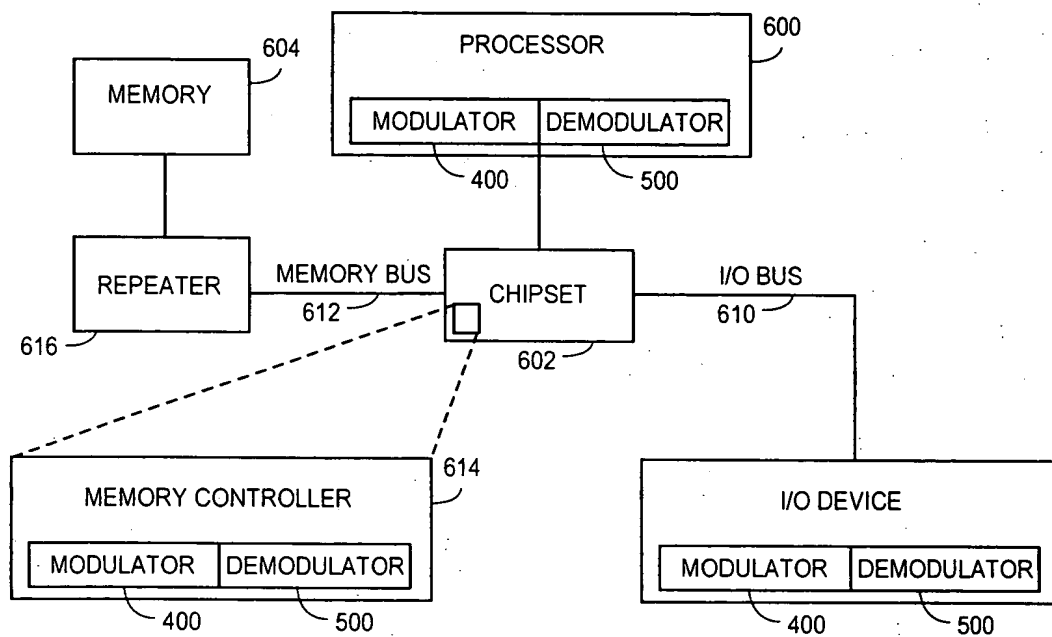


FIG. 7